

REMARKS

Applicant thanks the Examiner for the thorough consideration given the present application.

Claims 1-7 are pending. Claims 1 and 3 are amended. Claims 6 and 7 are added. Claims 1, 3, and 6 are independent.

Reconsideration of this application, as amended, is respectfully requested.

Priority Under 35 U.S.C. §119

Applicant thanks the Examiner for acknowledging their claim for foreign priority under 35 U.S.C. §119 and receipt of the certified copy of the priority document.

Drawings

Applicant respectfully requests a Notice of Draftsperson's Patent Drawing Review, Form PTO-948, indicating whether the formal drawings are approved, with the next official communication.

Rejection under 35 U.S.C. §103(a)

Claims 1-5 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,938,447 to Kirksey in view of U.S. Patent No. 6,185,538 to Schulz. This rejection is respectfully traversed.

While not conceding the appropriateness of the rejection, but merely to advance prosecution of the instant application, independent claim 1 is amended to recite a combination of steps in a method for specially reproducing sound using an information reproducing

apparatus for reading out data from a recording medium having audio data and video data, wherein audio data read out from a recording medium during  $n$ -speed reproducing, where  $n$  is a positive number greater than 1, is converted into text data by sound recognition, and the characters representing text data are displayed superimposed on specially reproduced images.

Similarly, independent claim 3 is amended to recite a combination of elements in an information reproducing apparatus for reading out data from a recording medium having audio data and video data, wherein the audio data read out from a recording medium during  $n$ -speed reproducing, where  $n$  is a positive real number greater than 1, is converted into text data by sound recognition, and the characters representing text data are displayed superimposed on specially reproduced images displayed in a display device.

Newly presented independent claim 6 is directed to a combination of elements in an apparatus for reproducing information for reading out data from a recording medium having audio data and video data, including a system controller for controlling a reproducing speed of the recording medium; MPEG audio and video decoders for decoding audio data and video data; an image signal processing circuit for performing a signal processing for  $n$ -speed producing, where  $n$  is a positive real number greater than 1, with respect to decoded video data; a sound recognition text conversion circuit for converting decoded audio data into text data by sound recognition; and an on-screen character processor for generating video signals displayed by superimposing the characters representing text data with the NTSC reproduced images, wherein during special reproduction performed at  $n$ -speed, the contents of audio data for  $n$ -seconds recorded on the recording medium are displayed for 1 second.

It is respectfully submitted that the combinations of elements and steps set forth in independent claims 1, 3, and 6 are not disclosed or made obvious by the prior art of record, including Kirksey and Schulz.

In conventional special reproduction systems, e.g., double-speed reproduction, video tape recorders (VTR) or cassette tape recorders directly reproduce and output a sound at a frequency two times higher than the normal reproduction. Another special reproducing method involves thinning reproduced sound, for example, quadruple-speed reproduction, in which three-quarters of the reproduced audio data is cut, and one-quarter is reproduced and output at normal speed. As can be seen, in conventional special sound reproducing methods, in the case of  $n$ -speed reproduction, the reproduced sound frequency becomes  $n$ -times higher, or the amount of reproduced audio data becomes  $1/n$  times smaller, in comparison to normal reproduction. As a result, a substantial amount of audio data is omitted.

In order to solve this problem, the present invention processes video data so that the first 1 second contents are extracted and displayed from the contents of images for  $n$ -seconds recorded on the recording medium, and the rest are removed. Sound data is processed so that only the first 1 second contents are extracted and displayed from the contents of sounds for  $n$ -seconds recorded on the recording medium, and the rest of the sound contents are removed.

The amended claims 1 and 3 and new claims 6 and 7 are directed to a method and apparatus for processing image and sound data in accordance with the reproducing speed of the recording medium. Accordingly, using a recording medium at  $n$ -reproducing speed, the method

and apparatus of the present invention provide the viewer/listener with appropriate image and sound data reproduced from the recording medium.

Both Kirksey and Schulz provide systems and methods for processing image and sound data with *normal (1-reproducing speed) reproducing speed* from a recording medium or data source. Only the present invention provides an apparatus and method for processing image and sound data using a *variable (n-reproducing speed) reproducing speed* from a recording medium or data source.

Kirksey discloses a “method extending the time a word is spoken in an audio-visual for the purpose of providing longer presentation of the associated written word. This extension or spreading out of the time a word is heard is accomplished by digitizing the sound of the word on a hard disk as a waveform and then reconfiguring the waveform.”

However, the Kirksey method only processes the image and sound data at *the normal (1-reproducing speed) reproducing speed* from the recording medium or data source. Neither Kirksey nor Schulz teaches or suggests processing image and sound data with a variable (n-reproducing speed) reproducing from a recording medium or data source as in the presently claimed invention.

In view of the foregoing, it is respectfully submitted that Kirksey, taken alone or in combination with Schulz, does not disclose or render obvious the present invention as recited in the independent claims. Reconsideration and withdrawal of the rejection of the claims are, therefore, respectfully requested. It is respectfully submitted that independent claims 1, 3, and 6 are allowable. Since the dependent claims depend from allowable independent claims, they should also be allowable for at least the reasons set forth above, as well as for the additional

limitations provided by these claims. Accordingly, all pending claims should be in condition for allowance.

Conclusion

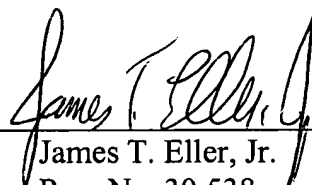
All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. It is believed that a full and complete response has been made to the outstanding Office Action, and that the present application is in condition for allowance.

If any issues remain, however, the is invited to telephone Sam Bhattacharya (Reg. No. 48,1070 at 703-205-8000 in an effort to expedite prosecution.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17, particularly extension of time fees.

Respectfully submitted,

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**MARKED-UP COPY OF AMENDED CLAIMS 1 AND 3**

1. (Amended) [In a] A special reproducing method for specially reproducing sound by using an information reproducing apparatus for reading out data from a recording medium having audio data and video data, [a special reproducing method of sound, characterized in that:] wherein the audio data read out from a recording medium during [special reproduction] n-speed reproducing, where n is a positive number greater than 1, is converted into text data by sound recognition, and the characters representing text data are displayed[, being overlapped with special] superimposed on specially reproduced images.

3. (Amended) [In an] An information reproducing apparatus for reading out data from a recording medium having audio data and video data, [an information reproducing apparatus, characterized in that:] wherein the audio data read out from a recording medium during [special reproduction] n-speed reproducing, where n is a positive real number greater than 1, is converted into text data by sound recognition, and the characters representing text data are displayed[, being overlapped with special] superimposed on specially reproduced images displayed in a display device.

**CLAIMS 6 AND 7 ARE ADDED.**